

known in nephritic colic; and, lastly, and most important, is the fact that in renal lithiasis, besides the anuria, there are always characteristic disorders of the urinary secretion, such as haematuria, the presence of calculi, gravel, etc., and now and then of pus, all of which are absolutely wanting in the nephritic attacks of locomotor ataxia.

Besides, it is well understood that inquiry into the concomitant symptoms should never be neglected.

In M. Raynaud's case the correctness of the diagnosis was confirmed by the anatomical examination, which revealed the well marked typical lesions of progressive locomotor ataxia; *viz.*, sclerosis of the posterior columns.

THE FUNCTIONAL CONDITION OF THE NERVES IN HYSTERICAL HEMI-ANÆSTHESIA.—It is well known that one of the commoner symptoms of hysteria seems to be anaesthesia, or analgesia, due, generally, to complex sensorial disorders. It is known, also, that Duchenne, (of Boulogne,) by showing that the application of electricity on the anaesthetic parts caused pain, claimed to have cured the anaesthesia.

M. Ch. Richet, hospital *interne*, has investigated the special characteristic of electric excitation of the anaesthetized parts, on four hysterical patients in M. Charcot's service. The following is the result of his observations:

If we pass a constant current from arm to arm in such a way as to electrize the cord at the same time, we find very little more pain produced on the healthy, than on the anaesthetic side. We find, moreover, pain at a limited point, either right or left, by using a large plate for the positive electrode, and a point for the other. In this case it is always at the negative pole that the pain is perceived, no matter whether it is applied to the sound side, or the other. The same is the result with the use of interrupted currents, with this difference, however, that the pain is referred to the wrist, either right or left.

If, in order to avoid the objection that the pain is felt in the cord, and referred to the electrized points, we pass the current between two points very near each other, the induced current gives still the same results as the interrupted current. In the two cases, there is exactly the same sensibility on the well as on the diseased side.

To render this more apparent, M. Richet transfixed a fold of the skin with a pin, and a little further on he inserted another under the skin. No pain was felt, but when he passed a current of electricity between the pins, an intense pain was provoked, (always greatest at the negative pole) much more severe than that due on the healthy side, to the passage of the current between flat electrodes. This greater intensity of the pain on the anaesthetic side explains itself by the fact that the electric needle inserted into the skin acts directly on the nerves, while on the other side they are covered by the horny layer of the epidermis.

It would seem, therefore, that the passage of the current woke up the sensibility at the points traversed, but it is not so. If, without withdrawing the needles by means of which the current has been passed, we heat

them with an alcohol lamp, no pain is felt by the patient. The anæsthesia is therefore as marked as before the experiment was tried, and Duchenne was wrong when he declared his patients cured.

These experiments also indicate that, as M. Charcot believes, there are no anatomical lesions of the nerves in these hemi-anæsthesias, since they are still capable of transmitting the electric sensation to the nervous centres. Finally, they show that a nerve, under the influence of a functional perturbation, the nature of which is still unknown, can yet remain sensible to the action of certain agents, such as electricity.

CEREBRAL LOCALIZATIONS.—M. Charcot, in some remarks made at the session of the Soc. de Biologie, July 15, (rep. in *Gaz. des Hôpitaux*, No. 83) divided the cerebral localization of the lesions in disease into two classes, the deep and the superficial, or cortical. Of the first class he remarked, only one could be said to be absolutely determined, it is when the locality of the lesion is behind the internal capsule, and is revealed by a hemi-anaesthesia. This was the only localization, admitted by him in the deeper portions of the brain.

Among the superficial or cortical localizations, he admitted only those in the system of the paracentral lobe; these were manifested by motor troubles. In the system of the paracentral lobe he included not only this lobe itself, but also the ascending frontal convolution, and the ascending parietal convolution of the internal surface, of which the paracentral lobe is only the expansion.

THE INFLUENCE OF CEREBRAL CIRCULATORY ARREST ON THE GENERAL CIRCULATION.—At the session of the Soc. de Biologie, Aug. 5, (reported in *Gaz. des Hôpitaux*, No. 92) M. Couty reported the results of his studies, in the laboratory of M. Vulpian, of the influence of cerebral anaemia on the cardio-vascular functions.

Operating on curarized dogs; directly obliterating the cerebral arteries by the spores of lycopodium, instead of tying the encephalic vessels; using self-registering apparatus to exhibit the condition of the circulation, he was able thus to obtain quite exact results. He was able, even, in some cases, by the use of the microscope, to observe the disorders due to circulatory arrest of a limited portion of the brain.

If the anaemia was general, both in the cerebrum and mesocephalon, there was observed: 1. *A considerable increase* of the arterial tension, doubling, and, in some instances, tripling its initial rate; 2, a retardation of the pulse, which fell from between 180 and 140 to 30 or 40 per minute.

After lasting some time, eight or ten minutes at least, these phenomena cease, and the tension may descend even below the normal.

If the anaemia exists only in the anterior parts of the brain, the heart is slowed, but there is no notable or persistent variation of the arterial tension; the retardation of the cardiac pulse is itself less than is the case in general cerebral anaemia.

Some of M. Couty's results having been published in 1875, are therefore anterior to those published by Sigmund Mayer in February, 1876;